

MONITORING & EVALUATION REPORT--2009
LOWER GUNNISON UNIT
COLORADO RIVER SALINITY CONTROL PROJECT
USDA-NRCS



IWM MONITORING & EVALUATION REPORT

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M&E EXECUTIVE SUMMARY **HYDROSALINITY**

Project: Lower Gunnison

- The project plan is to treat **135,000** acres with improved irrigation systems.
- To date, **59,530** acres have improved irrigation systems applied.
- The project plan is to reduce salt loading to the Colorado River system by **166,000** tons of salt.
- In FY 2009, salt loading has been reduced by **4,669** tons/year.
- The cumulative salt load reduction is **104,992** tons/year.

Cost effectiveness –

- The *planned* cost per ton of salt saved with prior year contracts is **\$92.27/ton**. This is based on the following formula:

FA + TA = Total Cost X Amortization Factor = Total amortized cost
Total amortized cost divided by total annual tons salt saved = Cost/Ton

FA is total dollars obligated in EQIP & Parallel Program (including wildlife).
TA is 67% of the FA (This number includes education and monitoring).
Amortization factor for 2009 is .06830

- Irrigation Systems Applied = **2,980 Acres**
- Unimproved acres treated = **59,530 Acres**
- Improved surface irrigation systems installed= **1,765 Acres**
- Irrigation water conveyance delivery/ gated pipe
Acres treated = **48,035 Acres**
- Sprinkler & Drip irrigation systems installed= **1,215 Acres**
(Includes Linear, Center Pivot, Side Roll, & Big Gun)

Acres treated= **10,076 Acres**

**LOWER GUNNISON IRRIGATION MONITORING & EVALUATION
2009 REPORT
USDA & NRCS**

Introduction

Since its inception in 1990, the Natural Resources Conservation Service (NRCS) has been applying improved irrigation systems and practices with cooperators in the Lower Gunnison Salinity Control Area, through the Colorado River Salinity Control Program (CRSCP). Funding for the CRSCP has been primarily made through the Environmental Quality Incentives Program (EQIP) and the Basin States Parallel Program (BSPP).

In addition to upgrading structural components of irrigation systems, CRSCP includes an irrigation water management program geared toward optimizing the efficiencies of these systems. Improved irrigation systems will not achieve their full efficiency potential without effective management.

Since the commencement of the IWM program in 2003 Specialists funded through the BSPP program, administered through the Conservation Districts, have provided assistance to the Delta and Montrose Field Office's Staff in achieving objectives of the Salinity Program through effective management. The IWM Specialists have set up field demonstrations, tours, and media events and have worked one on one with producers to educate them on how to achieve improved efficiency with their irrigation systems.

The Mobile Irrigation Laboratory is an essential tool to the proper operation, understanding, and implementation of installed irrigation system improvements, irrigation water management and planning. The IWM Program is important in terms of promoting public relations with producers and management aspects of contract implementation and follow-up in order to achieve overall salt reduction.

Prior to the IWM Program, landowners were implementing improved irrigation systems without effective IWM record keeping or necessary follow-up and adjustments necessary for optimum system efficiency. The IWM Program is important from the perspective of educating producers to assume responsibility for managing irrigation water in the most efficient methods through monitoring and evaluation to meet the needs of the crops.

2009 Highlights & Accomplishments

The 2009 IWM season was plagued with some inconsistencies and a lack of effective follow-up because of a discrepancy of available funding and staffing. The IWM program for the most part was initiated during the beginning of the season through contacts with producers having IWM scheduled in their contracts on an incentive basis and working with them in establishing an irrigation schedule using the irrigation tool box work sheet. Factors such as system type, soils, crops and available water were all taken into consideration. Soil moisture monitoring was evaluated in the field to establish a baseline for future management adjustments. In some situations the IWM Specialist would accompany the Planner in the field to accomplish this task. Producers were instructed on how and when to maintain records of their irrigation application rates and frequencies so this data could be evaluated against soil moisture monitoring results in order to make necessary adjustments to achieve optimum efficiencies. Unfortunately after this aspect of the program was addressed there was a disruption due to a lack of funding and the laying off of critical staff. This ultimately resulted in a limited amount of assistance that could be provided in monitoring and follow-up essential for making necessary adjustments in order to achieve program objectives. This essentially left NRCS Planners and other staff to fill in the gaps. Although the majority of producers maintained adequate records of their IWM management and met certification requirements at the end of the season overall the IWM program was not as effective as it could have been.

IWM Accomplishments include the following:

- Total Producer Contacts: 221
- Total IWM Requests: 98
- Follow-up Contacts: 67
- Paid IWM Contract Evaluations: 127
- Unpaid IWM Contract Evaluations: 11
- MIL Utilization: 92 contacts on 5,747 acres

2009 Value of Irrigation Practice's Reviewed

BASIN:	11 Contracts	\$783,590
EQIP:	116 Contracts	\$563,3129
TOTAL:	127 Evaluations	\$6,416,719 on 5,712 acres

Recommendations for Future Success of the Irrigation Water Management Program

1. It is recommended that program guidelines and identified producers be firmly established and adopted by both Field Offices in order for program delivery to be consistently carried out.
2. In order for this program to be successfully carried out the irrigation tool box job sheet and other revised worksheets must be developed and used by all staff working with IWM.
3. A guidance document should be developed that outlines the steps, timeframes and appropriate action that needs to be taken in order to achieve successful program delivery. This guidance could include but not be limited to:
 - A list of all producers applying IWM
 - An initial field visit to establish baseline conditions
 - IWM plan development
 - Soil moisture levels
 - Crops being produced and target consumptive use requirements
 - Follow-up monitoring and recommendations for necessary adjustments
 - Documentation of irrigation applications, frequency and adjustments in management to achieve improved efficiencies
 - Certification based on documented measurable improvements in system operation efficiency.
4. The Mobile Irrigation Lab is a valuable tool in providing effective follow-up and monitoring for acquiring data in order to make effective recommendations for improvements in management. This could be utilized more efficiently through:
 - Prioritizing those clients and monitoring needs that would have the greatest benefit from its use.

-Schedule the use of the Mobile Irrigation Lab on a calendar or other document in such a way that it is used efficiently by all three offices.

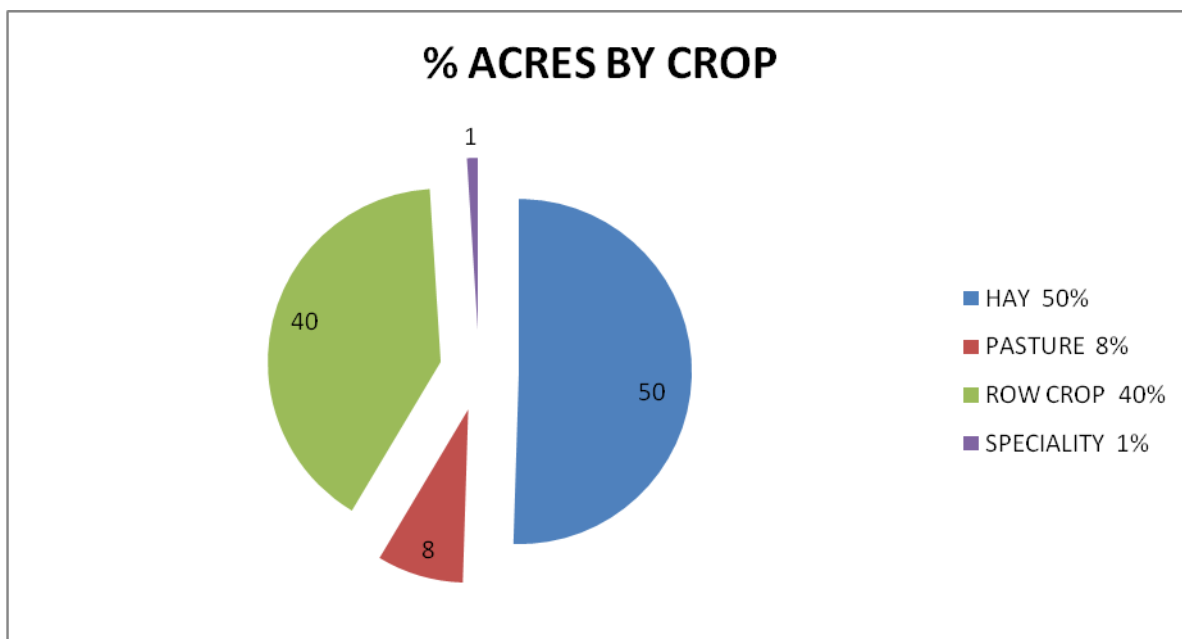
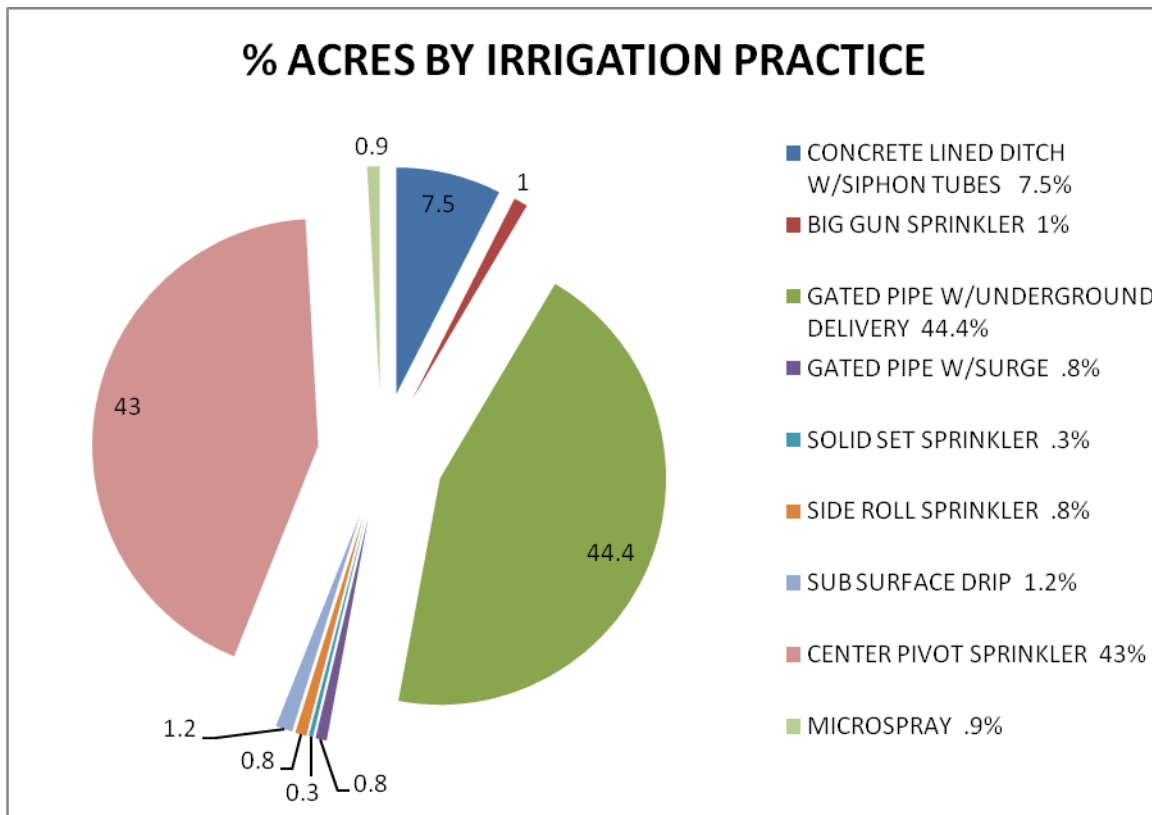
NRCS Irrigation Efficiency Standards for Evaluations

TYPE OF IRRIGATION SYSTEM	% OF MONITORED EFFICIENCY
Open ditch	35%
Open ditch w/ siphon tubes	40%
Concrete ditch w/siphon tubes	50%
Gated pipe	50%
Underground pipe & Gated pipe	50%
Underground pipe/Gated pipe/Surge	55%
Center Pivot Sprinkler	90%
Big Gun Sprinkler	70%
Side roll Sprinkler	75%
Micro spray	90%
Drip Irrigation	95%

**2009 IWM Status Review of Evaluated Practices by
Acreage / Crop Type / Practice
Delta & Montrose Field Offices**

Type of Practice	Hay	Pasture	Row Crop	Speciality Crop	Total acres	% by Practice
CONCRETE LINED DITCH W/SIPHON TUBES	47		439		486	7.5
UNDERGROUND DELIVERY W/ GATED PIPE	1489.4	311.2	1063.5		2864.1	44.4
GATED PIPE W/ SURGE			52.3		52.3	0.8
SIDE ROLL SPRINKLER	54.8				54.8	0.8
CENTER PIVOT SPRINKLER	1596.5	225	952.5		2774	43.0
SOLID SET SPRINKLER		5.1		13.7	18.8	0.3
BIG GUN SPRINKLER	64.7				64.7	1.0
MICROSPRAY				58	58	0.9
SUB-SURFACE DRIP			56	20	76	1.2

TOTAL ACRES REPRESENTED	3252.4	541.3	2563.3	91.7	6448.7	100
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Note: Rounding errors may result in the sum of graph percentages being less than 100%.
Source data does equal 100% as per percentage and total columns verification.

2009 IRRIGATION WATER MANAGEMENT SUMMARY & OUTLOOK

During the 2009 program year we experienced an ongoing trend of existing improved surface systems that have reached the end of their life expectancies being converted to higher efficiency sprinkler systems. This trend is reflected in the numbers and acres of systems being planned and applied. This has also carried with it certain challenges and issues associated with conventional tillage practices still being applied resulting in problems with infiltration on heavy clay soils under new (AIT) sprinkler irrigation systems.

Because of these advances in technology and the transition from improved surface systems to highly efficient sprinkler systems there will be a greater demand for technical assistance in the efficient operation of these systems particularly where soil, water and plant relations are affected. There will be a greater need and demand for careful monitoring of application rates, soil infiltration and moisture levels coupled with changes in tillage/residue management in order for these systems to function correctly at their highest levels of efficiency.

As Advanced Irrigation Technology gains acceptance by a greater number of producers the use of soil infiltration tests will become increasingly important information for system operation and maintenance and proper management. IWM Specialists, through workshops, field days, tours, news articles and coordination with CSU Extension, Irrigation Equipment Suppliers, Conservation District Boards, and Irrigation Water Districts, can continue to bridge the gap between producers and the latest advancement of irrigation technology.

Uncertain national economics will focus agriculture producers on prices of fuel, fertilizer, seed, equipment, technology, and commodity prices. Producers must become efficient consumers of water and energy in order to remain in business. Efficient water application, reduced tillage, and other methods that incorporate efficient use of water and energy resources deserve to be advocated, publicized, and incorporated into project ranking considerations. Education and support of all minimum-till practices to enhance crop residue, improve soil health, increase water infiltration and conserve energy will be a priority in producer relations by the IWM Specialists.

As this trend continues a point will be reached where there are limited returns on investment because the biggest return has already been achieved, when improved systems were installed on previously untreated acres. More advanced and highly efficient systems are being installed on previously treated acres at a much higher cost with reduced benefits. A shift in emphasis to off-farm conveyance systems will not only achieve greater salt savings by addressing previously non-treated land but will provide an incentive for the continued demand and advancement toward highly efficient gravity flow, pressurized, sprinkler irrigation systems. The development and piping of main

stem irrigation canals and laterals will provide the groundwork for the transition to sprinkler irrigation systems.

M&E EXECUTIVE SUMMARY – WILDLIFE - 2009

LOWER GUNNISON UNIT

Acres of Wildlife Habitat Applied

	Cumulative Acres 2008	Cumulative Acres 2009	Net Change for 2009
Upland	450.0*	487.6	+37.6
Wetland	229.5*	238.0	+8.5

* Corrected from 2008 M&E report as Delta CRSCP acres applied were double counted.

Wetland Data

Cumulative acres impacted year 2008	Cumulative acres impacted year 2009	NET AREM Unit change 2008	Net AREM Unit change 2009	Net change for 2009
No Data	No Data	No Data	No Data	No Data

Funding for Wildlife Habitat

% of total funds spent on wildlife through 2008	% of total funds spent on wildlife through 2009
2%	2%
% of total funds contracted on wildlife through 2008	% of total funds contracted for wildlife through 2009
4%	4%

Habitat Replacement Goals

Salinity acres treated to date	59, 530
Habitat mitigation goal: 2% of salinity acres treated	1191
Habitat replacement acres to date	725.6
Remaining acres needed to meet habitat replacement goal	465.4

*This does not include 17.9 acres of upland and 12.5 acres of wetland wildlife habitat applied through WHIP and WRP within the Lower Gunnison salinity area.

WILDLIFE
2009 MONITORING & EVALUATION REPORT
LOWER GUNNISON EQIP PRIORITY AREA

History

Salinity control work by Natural Resources Conservation Service (NRCS) has gone through 4 different phases. The first was under the Colorado River Salinity Control program (CRSCP) from 1984-1995. Phase 2 was called interim-EQIP (Environmental Quality Incentives Program) and lasted for only fiscal year 1996. The third phase from 1997 to 2007 is funded under the EQIP Program which has included funds from the Basin States Parallel Program (BSPP). The first three phases are covered by the same NEPA process and documents that report **replacement of wildlife values foregone (mitigation) and impacts to wildlife will be accounted using a value system**. NRCS chose to use the Habitat Evaluation Procedure (HEP) developed by the U.S. Fish and Wildlife Service for tracking “on farm” changes in wildlife habitat values. Six species models were chosen to represent different aspects of wildlife habitat in the unit that may be impacted by the project. Pheasant was chosen to represent habitat diversity, edge effect and edge habitat. Yellow warbler represents cottonwood-willow and other woody habitat associated with irrigation ditches and tail water. Mallard breeding habitat represents shallow wetlands and nesting habitat surrounding these wetlands. Mallard – winter habitat represents winter roosting areas (large water bodies and ice free water) and management of crop residues. Meadow vole represents sedge- rush wet meadows often associated with leaky ditches and inefficient irrigation. Marsh wren represents cattail-bulrush (robust emergent) wetlands and the screech owl is associated with groups of large deciduous trees. The models are custom models that underwent peer review and were developed explicitly for this project with the assistance of USFWS. Changes in wetland values are supposed to be tracked using the Avian Richness Evaluation Method (AREM) developed by Paul Adamus under contract with the Environmental Protection Agency (EPA). Refer to the 1994 Monitoring and Evaluation Plan for the Lower Gunnison Unit for details on monitoring methods used under the Colorado River Salinity Control Program.

The fourth phase from 2007 to present is still funded under EQIP and Basin States Parallel Program; however **habitat replacement goals are now 2% of the acres treated for salinity** rather than replacement of habitat values forgone using the Habitat Evaluation Procedure (HEP) as a habitat quality measurement. The U.S. Fish and Wildlife Service concurred with this decision to change habitat replacement tracking from habitat values to acres. It is estimated NRCS has reached approximately 58% of their salinity treatment goals, and 725.6 acres of wildlife habitat replacement have been applied and still exist. By the time 100% of NRCS’s salinity treatment goals are achieved it is projected that approximately 1250 acres of wildlife habitat replacement

acres will be applied and still existing. A key issue with the U.S. Fish and Wildlife Service is that credited mitigation acres must be on the ground and functioning as habitat replacement when the salinity project is complete. Some loss of wildlife habitat will take place as operation and maintenance agreements expire and land uses change in the Valley. To account for the loss, it is likely NRCS will need to apply more habitat replacement acres than the goal amount. NRCS biologists will visit all habitat replacement projects every 3 years and adjust credited acres to what is actually on the ground and functioning. Acres lost for whatever reason will be removed from the credited replacement acres. Depending on how many acres are treated for salinity, it is estimated that the habitat replacement goal will be between 1400 and 2000 acres.

Methods

HEP is very labor intensive. Through 1995 habitat was evaluated and a HEP analysis was completed on more than 70% of all contracted acres before and after application of salinity control practices. Reductions in staff made this method unfeasible. To make the workload more manageable a statistical analysis of HEP data collected through 1998 was conducted to determine adequate sample size needed to calculate mean habitat suitability indexes (HSI) with 95% confidence the calculated mean is within + or - 0.1 of the real mean. HSI's are indexes ranging from 0 to 1.0 of the habitat value for selected wildlife species.

The indexes are calculated using measurements of various habitat variables that are identified in habitat models (See 1994 Lower Gunnison Unit Monitoring and Evaluation Plan for complete details of the HEP procedure used). In 1999 and 2000 additional data was collected, desired sample sizes were achieved, and mean HSI values were calculated. The mean HSI for species models for 6 wildlife species were calculated for 2 separate categories; operating units not applying wildlife practices and operating units applying wildlife. In 2003 the Colorado State Program Manager ordered all WHIP and WRP contracts that had been applied in the salinity area to be counted for habitat replacement. These contracts were entered into the spreadsheet as plans with wildlife and plans applying wildlife. These indexes were then multiplied with the average acres of habitat found on the operating units for each wildlife species to obtain Habitat Units Values (HUV's). To estimate project impacts HUV's were calculated both before and after project application. Analysis of data in 2001 indicated additional inventories are needed for yellow warbler and marsh wren to obtain the desired confidence levels. Those were completed this year and are included in the data analysis.

In 2004 and again in 2006, NRCS biologists reviewed results of the previous year's HEP analysis and discovered some errors in how conservation plans without wildlife practices were being compared to plans with wildlife practices. The errors in the spread sheet were rectified which resulted in large changes in Habitat Unit Values credited to the project.

NRCS biologists looked at the new calculations with much scrutiny and determined the new calculation methods were the correct way to account for changes in Habitat Unit Values.

A spread sheet was developed to track additional information that may be useful in evaluating the project in reference to wildlife habitat and mitigation goals. Data such as wetland values, number of contracts planning and/or applying wildlife practices, acres of land managed for wildlife, and dollars spent on wildlife were recorded. The data was then analyzed to determine effectiveness of wildlife habitat replacement efforts.

Applications for financial assistance were awarded funding through ranking processes. The processes varied from 1996-2006 but incentives for applying wildlife habitat were included in all of them. In 1996 Interim-EQIP wildlife practices were prioritized the same as they were under the Colorado River Salinity Program. Under this system, applicants planning to apply wildlife practices received 3 to 5 extra points out of a possible 46. In 1997 ranking systems began to include cost-benefit computations and wildlife practices were given 2 extra points/acre not to exceed 10 total points. Wildlife practices are relatively expensive and with the cost benefit computations and 10 point maximum, many wildlife practices were not being funded. In an attempt to increase wildlife funding ranking points were increased in 1998, to 6 points/acre with a 30 point maximum for wetland habitat and 4 points/acre with a 20 point maximum for upland habitat. In 1999 the Montrose field office again increased points awarded for wildlife habitat development to 30 points/acre with a maximum of 150 points for either upland or wetland habitat. Delta created a sub fund of \$37,800 to be spent only on wildlife habitat development. Wildlife applications were ranked using the system developed for the Wildlife Habitat Incentives Program. If money was left in the wildlife sub-fund it was transferred to salt control funds.

In 2000 Montrose used the same ranking they did in 1999. Sub-funds were no longer allowed in 2000 so Delta changed their ranking to 10 points/acre for upland or wetland habitat with a maximum of 50 points. Ranking procedures remained unchanged in 2003, but in 2004 a new ranking procedure using the habitat evaluation index change from existing condition to planned condition was used. Also in 2004, a separate EQIP fund for wildlife habitat projects in salinity areas was set up by the NRCS State Office.

In 2004, managers of the Basin States Parallel Program (BSPP) were approached to assist with funding wildlife projects to offset salinity project impacts. The forum that oversees the program agreed. Projects are selected through an RFP process. Proposals are ranked and selected by an inter-agency committee with representatives from the Colorado Division of Wildlife, U.S. Fish and Wildlife Service, Bureau of Reclamation, Colorado State Land Board, and NRCS. The committee also decides which Salinity Control Area (McElmo, Lower Gunnison or Grand Valley) will be credited with habitat replacement by these projects. Many of the BSPP projects are considerably larger than those funded through NRCS programs. The committee decided to not include large BSPP projects in the indexing system described above, but instead, add HUV's derived from these large

projects directly to the HUV's calculated with the indexes. Prior to development of the RFP process, 3 wildlife projects were funded with the BSPP. An RFP was requested in the spring of 2004, 2007 and 2008. To date the BSPP program has funded 12 wildlife projects totaling \$387,613.

In 2007 the method for crediting habitat replacement was changed from habitat values to acres (see history section). Databases and spreadsheets have been developed to track the data shown in the tables in the results sections. These are updated annually for this monitoring and evaluation report. Additionally, every 3 years an NRCS biologist will visit all habitat replacement acres to determine if they still exist and function as habitat acres. Acres that cease to exist and/or function as habitat acres will be subtracted from the credited acres. It was thought that in the 2007 M&E report the CRSCP wildlife acres applied for Delta were left out, so they were added back into the 2008 report. It turns out they were actually reported in 2007, which lead to double reporting of Delta's CRSCP acres in 2008. That error has again been corrected in the 2009 M&E report. The difference in the summary tables of the acres of habitat applied for the 2008 and 2009 M&E report shows this change (35.3 acres of upland wildlife habitat and 29.1 acres of wetland wildlife habitat).

Results

CRSCP contracts are all now completed so there will be no further changes for those figures. The data totals for CRSCP does not include canceled contracts. The totals and percentages are for contract dollars actually obligated. Since 1985 the data indicates \$1,783,068 which represents 4% of the total obligated funds (\$42,851,252) in the Lower Gunnison Unit have been contracted for installing wildlife practices (Table 1). To date, approximately 49% of the wildlife funds and 2% of the total funds have been spent on wildlife. \$918,114 of obligated wildlife money has not been spent to date due to practices deleted or not yet installed. All contracts are completed to date for contracts through 2001. These years show real dollars spent and actual acres installed. From 2002 to present, less than 100% of contracts have been completed and represent planned cost-share dollars. Twenty-three percent of all contracts developed since 1989 have at least 1 wildlife practice planned for application and **16% have applied at least 1 wildlife practice** (Table 2).

Table 1. Money obligated and spent on wildlife practices.

OFFICE	YEAR	TOTAL CONTRACT DOLLARS	PLANNED WILDLIFE CONTRACT DOLLARS	APPLIED WILDLIFE CONTRACT DOLLARS	PERCENT PLANNED TO SPEND ON WILDLIFE	PERCENT OF WILDLIFE DOLLARS SPENT TO- DATE:	PERCENT OF TOTAL DOLLARS SPENT ON WILDLIFE TO-DATE
MONTROSE							
CRSCP	1989-1995*	\$2,476,057	\$318,193	\$171,315	13%	54%	7%
IEQIP	1996*	\$718,898	\$45,536	\$33,922	6%	74%	5%
EQIP	1997*	\$460,390	\$9,825	\$3,988	2%	41%	1%
	1998*	\$419,012	\$5,051	\$3,411	1%	68%	1%
	1999*	\$306,934	\$18,400	\$13,132	6%	71%	4%
	2000*	\$270,760	\$34,557	\$18,748	13%	54%	7%
	2001*	\$431,425	\$43,268	\$29,205	10%	67%	7%
	2002	\$696,547	\$59,228	\$17,734	9%	30%	3%
	2003	\$1,732,471	\$15,822	\$12,343	1%	78%	1%
	2004	\$2,133,306	\$100,621	\$40,788	5%	41%	2%
	2005	\$1,629,024	\$44,621	\$16,982	3%	38%	1%
	2006	\$1,287,875	\$33,493	\$5,601	3%	17%	0%
	2007	\$921,403	\$53,130	\$12,231	6%	23%	1%
	2008	\$886,067	\$10,844	\$0	1%	0%	0%
	2009	\$1,429,563	\$76,363	\$0	5%	0%	0%
BSPP	1997-2009	\$1,632,506	\$156,834	\$3,797	10%	2%	0%
	SUBTOTAL	\$17,432,238	\$1,025,786	\$383,197	6%	37%	2%
DELTA							
CRSCP	1984-1995*	\$7,057,848	\$195,289	\$128,354	3%	66%	2%
IEQIP	1996*	\$719,698	\$23,701	\$5,734	3%	24%	1%
EQIP	1997*	\$159,132	\$0	\$0	0%	0%	0%
	1998*	\$147,205	\$2,997	\$456	2%	15%	0%
	1999*	\$611,404	\$75,509	\$61,129	12%	81%	10%
	2000*	\$361,383	\$1,254	\$672	0%	54%	0%
	2001*	\$355,737	\$0	\$0	0%	0%	0%
	2002*	\$698,657	\$25	\$0	0%	0%	0%
	2003*	\$1,497,366	\$28,976	\$40,414	2%	139%	3%
	2004	\$1,914,619	\$10,925	\$10,752	1%	98%	1%
	2005	\$1,677,526	\$4,663	\$4,056	0%	87%	0%
	2006	\$2,345,609	\$2,775	\$1,258	0%	45%	0%
	2007	\$1,650,592	\$109,306	\$11,869	7%	11%	1%
	2008	\$1,299,011	\$66,619	\$26,943	5%	40%	2%
	2009	\$1,361,287	\$4,465	\$1,149	0%	26%	0%
BSPP	1997-2009	\$3,561,940	\$230,779	\$188,972	6%	82%	5%
	SUBTOTAL	\$25,419,014	\$757,282	\$481,757	3%	64%	2%
	GRAND TOTAL	\$42,851,252	\$1,783,068	\$864,954	4%	49%	2%

* Indicates 100% of contracts have been completed for that year. As a result, total contract dollars reflects actual dollars spent. Program years that do not have an * have less than 100% of contracts complete, therefore total contract dollars reflects contract dollars planned.

Table 2. Number and percent of contracts planning and/or applying wildlife practices.

OFFICE	YEAR	TOTAL # OF CONTRACTS	# OF CONTRACTS WITH PLANNED WILDLIFE PRACTICES	PERCENT CONTRACTS WITH PLANNED WILDLIFE PRACTICES	# OF CONTRACTS WITH APPLIED WILDLIFE PRACTICES	PERCENT OF WILDLIFE CONTRACTS WITH APPLIED WILDLIFE PRACTICES	PERCENT OF ALL CONTRACTS THAT HAVE APPLIED WILDLIFE PRACTICES
MONTROSE							
CRSCP	1989-1995	78	64	82%	59	92%	76%
IEQIP	1996	35	31	89%	25	81%	71%
EQIP	1997	63	13	21%	8	62%	13%
	1998	38	7	18%	4	57%	11%
	1999	22	6	27%	5	83%	23%
	2000	26	16	62%	9	56%	35%
	2001	24	17	71%	12	71%	50%
	2002	39	10	26%	6	60%	15%
	2003	15	4	27%	3	75%	20%
	2004	57	5	9%	5	100%	9%
	2005	44	4	9%	3	75%	7%
	2006	45	3	7%	1	33%	2%
	2007	20	3	15%	2	67%	10%
	2008	30	2	7%	0	0%	0%
	2009	30	2	7%	0	0%	0%
BSPP	1997-2009	71	8	11%	6	75%	8%
	SUBTOTAL	637	195	31%	148	76%	23%
DELTA							
CRSCP	1985-1995	180	59	33%	27	46%	15%
IEQIP	1996	26	8	31%	4	50%	15%
EQIP	1997	23	2	9%	0	100%	9%
	1998	7	1	14%	1	100%	14%
	1999	38	9	24%	8	89%	21%
	2000	18	1	6%	1	100%	6%
	2001	17	0	0%	0	0%	0%
	2002	28	1	4%	0	0%	0%
	2003	20	4	20%	4	100%	20%
	2004	58	2	3%	1	50%	2%
	2005	33	1	3%	1	100%	3%
	2006	36	1	3%	1	100%	3%
	2007	20	1	4%	0	0%	0%
	2008	24	2	8%	0	0%	0%
	2009	20	1	5%	0	0%	0%
BSPP	1997-2009	76	4	5%	3	75%	4%
	SUBTOTAL	624	97	15%	51	55%	8%
	GRAND TOTAL	1261	292	23%	199	68%	16%

Table 3 outlines the acres of habitat management planned and applied. Approximately 447.3 acres of wetland habitat and 1278.9 acres of upland habitat have planned management practices. Habitat management practices have been applied to 238 acres of wetland and 487.6 acres of upland habitat. To date, 53% of planned wetland management and 38% of planned upland management practices have been applied. There were no reported wetland impacts positive or negative.

Table 3. Acres of wildlife habitat management planned and applied and wetland impacts.

OFFICE	YEAR	ACRES OF WETLAND HABITAT PLANNED	ACRES OF WETLAND HABITAT APPLIED	% OF PLANNED WETLAND ACRES APPLIED	ACRES OF UPLAND HABITAT PLANNED	ACRES OF UPLAND HABITAT APPLIED	% OF PLANNED UPLAND ACRES APPLIED	ACRES OF WETLANDS IMPACTED	WETLAND VALUE BEFORE	WETLAND VALUE AFTER
MONTROSE										
CRSCP	1989-1995	129.8	97.4	75%	180	108.9	61%	No Data	No Data	No Data
IEQIP	1996	17.5	12.9	74%	29.2	23.2	79%			
EQIP	1997	14.1	13.1	93%	31.5	27.3	87%			
	1998	3.5	1.5	43%	4.4	3.2	73%			
	1999	16.1	12.5	78%	6	5.8	97%			
	2000	10.8	9	83%	41.6	16.6	40%			
	2001	7.2	6.8	94%	48.9	39.9	82%			
	2002	7.2	3.3	46%	13.3	9	68%			
	2003	9.7	2	21%	13	9	69%			
	2004	15	11.3	75%	92.2	62.1	67%			
	2005	8.5	5	59%	43.5	6	14%			
	2006	1.8	1	56%	22.8	14.8	65%			
	2007	2	0.5	25%	30	19.8	66%			
	2008	0	0	0	5	0	0%			
	2009	0	0	0	114.2	0	0%			
BSPP	1997-2009	37.9	6	16%	77.9	2	3%			
	SUB TOTAL	281.1	182.3	65%	753.5	347.6	46%	No Data	No Data	No Data
DELTA										
CRSCP	1985-1995	70.5	29.1	41%	136.2	35.3	26%	No Data	No Data	No Data
IEQIP	1996	21.0	7.0	33%	61.2	8.5	14%	4.0	1.4	3.0
EQIP	1997	15.7	0.0	0%	66.7	0.0	0%	2.0	1.8	1.9
	1998	5.4	0.0	0%	15.8	4.2	27%	1.0	0.6	1.7
	1999	8.5	3.0	35%	26	5.7	22%	1.0	1.1	1.2
	2000	0.0	0.0	0%	11.2	0.0	0%			
	2001	0.0	0.0	0%	0	0.0	0%			
	2002	0.5	0.0	0%	2.5	0.0	0%			
	2003	2.0	1.5	75%	35.7	25.2	71%			
	2004	3.9	0.0	0%	1.8	1.9	106%	3.9	1.7	0.0
	2005	0.0	0.0	0%	0.5	0.1	20%			
	2006	0.0	0.0	0%	1.3	1.3	100%			
	2007	7.0	0.0	0%	36.9	0.0	0%	1.0	1.2	0.2
	2008	4.1	0.0	0%	20.5	0.0	0%			
	2009	0.0	0.0	0%	2.3	0.0	0%			
BSPP	1997-2009	27.6	15.1	55%	106.8	57.8	54%			
	SUB TOTAL	166.2	55.7	34%	525.4	140.0	27%	12.90	8.70	7.97
	GRAND TOTAL	447.3	238.0	53%	1278.9	487.6	38%	12.9	8.7	8.0

Discussion and Conclusion

The habitat replacement goal is 2% of the acres treated for salinity. To date 59,530 acres have been treated with salinity practices. To be concurrent with project application, 1,191 acres of habitat replacement should currently be on the ground and functioning. To date 725.6 acres of habitat replacement are applied on the ground and functioning. The project is currently at approximately 61% of the habitat replacement goals. In 2007 NRCS biologist field checked all acres that had been reported as habitat replacement. The inventory resulted in a reduction of acres considered habitat replacement from 776 acres in 2006 to 684.4 acres in 2007 (incorrectly reported as 620 acres in the 2007 report from not adding the Delta CRSCP acres applied to the total). Urban development, changes in management and changes in land ownership are major reasons that some acres no longer met habitat replacement criteria and were removed from the accounting system. In 2009, 152.8 acres of habitat replacement was planned and 46.1 acres were applied. There were 23 contracts cancelled, of which 3 had wildlife practices planned. An additional 6 contracts were removed from the list because they were range contracts, comprehensive nutrient management plans, or duplicate entries. NRCS is currently 465.4 acres below habitat replacement goals. To be concurrent with salinity project implementation, NRCS will need to place higher priority on habitat replacement. Acres of habitat management and impacts to wetlands have also been tracked as other indicators of impacts. Wetland value data is missing. This tracking responsibility has been overlooked and needs to be addressed by management.